

Work Order ID 57546

April 8, 2010 9:14:32 AM



Page 1

Item ID: D3646-1

Accept



Setup Start



Revision ID:

Item Name: Arm

Stop



Start Date: 4/08/10 Start Qty: 4.00



Cust Item ID:

Required Date: 4/13/10 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Draw Number | Draw Rev. | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|----------------|--------------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
|----------|--------------|

| | |
|-------|-------|
| D3646 | Rev A |
|-------|-------|

| | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|
| 100 | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|



NC BRAKE

0.00

Brake NC

Memo

0.00

Brake NC

1-Punch to length as per Dwg D3646 & template DT8958

⇒ m.k 10/05/13

| | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|
| 110 | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|



Small Fab

0.00

Small Fab

Memo

0.00

Small Fab

1-Debur

⇒ m.k 10/05/13

| | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|
| 120 | | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|--|



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

SS 10/05/14

(4)

(4X)

(4X)

| W/O: | | | WORK ORDER CHANGES | | | | | |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 57546

April 8, 2010 9:14:32 AM



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Item ID: D3646-1

Accept



Setup Start



Revision ID:

Item Name: Arm

Stop



Start Date: 4/08/10

Start Qty: 4.00



Cust Item ID:

Required Date: 4/13/10

Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



Powdercoat

Powder Coating

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

1112588

0.00

0.00

7/14

10/05/14

44

4

Memo

START TIME:

7:30AM

OVEN TEMPERATURE:

320°F

FINISH TIME:

8:00AM

140



QC

Quality Control

QC3- Inspect Part Finish

0.00

0.00

Memo

4 - AR 10-5-14

150



Packaging

Packaging

Identify as per dwg & Stock Location:

229

0.00

0.00

Memo

10-5-14

40

| W/O: | | | WORK ORDER CHANGES | | | | | |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 57546

April 8, 2010 9:14:32 AM



Page 3

Item ID: D3646-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Arm

Start Date: 4/08/10

Start Qty: 4.00



Cust Item ID:

Required Date: 4/13/10

Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Stop



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/05/17 *[Signature]*
mf
10-5-14

| W/O: | | | WORK ORDER CHANGES | | | | | |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Picklist Print

April 8, 2010 9:14:31 AM

Page 1

Work Order ID: 57546



Parent Item: D3646-1



Parent Item Name: Arm

Start Date: 4/08/10

Required Date: 4/13/10

Comments: IPP Rev. A new issue 07.07.25 EC verified by:JLM

Start Qty: 4.00

Required Qty: 4.00

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Remaining Qty To Pick | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|--------------------------|---------------|----------------|--------|
| M304TR0.500W.035 | | Purchased | No | | | 100 | f | 29.6240 | 8.3368 | | | |



304 RD Tube .500 x .035W

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT017

29.624

112187

4.75

112800

24.874

M114482

8-3368 m-h 10/05/13

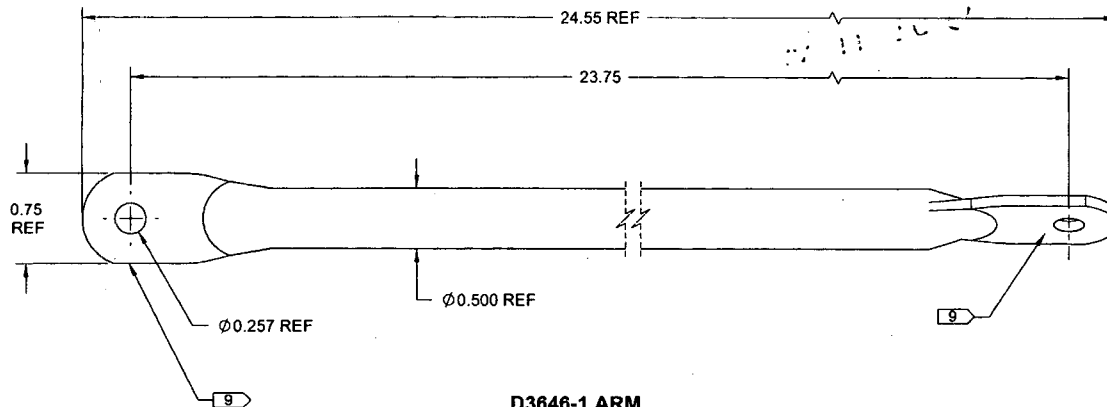
| W/O: | | | WORK ORDER CHANGES | | | | | |
|------|------|--|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



D3646-1 ARM

W0/57546

RELEASED
07/18/23/04

NOTES:

- 1) MATERIAL: AISI 304/316 SS TUBE $\phi 0.500 \times 0.035$ WALL PER ASTM A213/A269 OR ASME A213 (REF DART SPEC. M304TR0500W.035)
- 2) FINISH: POWDER COAT "BLACK SANDETEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3646-1" USING REMOVABLE TAG
- 7) WEIGHT: 0.38 lbs
- 8) MAKE PER TEMPLATE DT8958
- 9) PUNCH BOTH ENDS PER SPEC CONTROL DWG D2727

| | | | |
|------------|---|----|----------|
| B | REFORMAT DWG, ANGLE 65° WAS 45° (ZN C3-1), ADD IDENTIFICATION TAG (ZN A8-1, A8-2) | CP | 09.06.04 |
| A | NEW ISSUE | MB | 07.06.06 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | | | |
| DRAWN | | | |
| CHECKED | | | |
| MFG. APPR. | | | |
| APPROVED | | | |
| DE APPR. | | | |
| DATE | 09.06.04 | | |

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3646** REV. B
SHEET 1 OF 2
TITLE **ARM** SCALE NTS

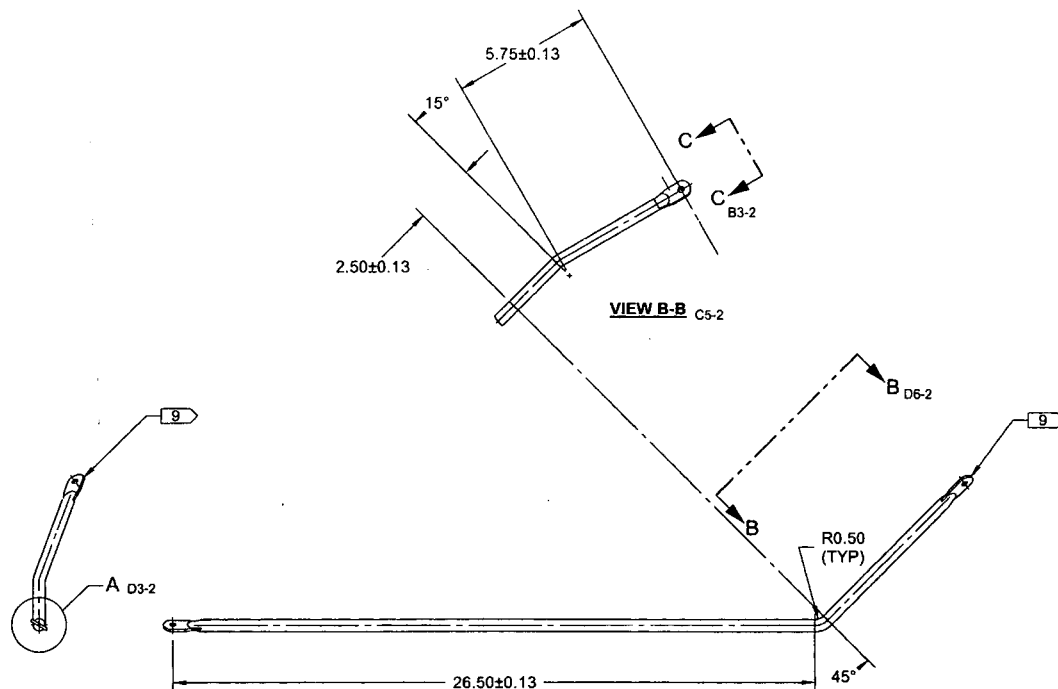
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Remember....

- Lean is war to WASTE.
- Waste is an activity or output that ***adds cost but does not add value***
- You have to get into a mindset of identifying and eliminating all wastes.

The 7 deadly wastes

- | | |
|--------------------------|------------------------------------|
| 1. Overproduction | 2. Rework |
| 3. Transportation | 4. Inappropriate / over Processing |
| 5. Unnecessary Inventory | 6. Delays / Waiting |
| 7. Unnecessary Motions | |



D3646-3 ARM

**VIEW C-C D5-2
SCALE 3X**

NOTES:

- 1) MATERIAL: AISI 304/316 SS TUBE $\phi 0.500 \times 0.035$ WALL PER ASTM A213/A269 OR ASME A213 (REF DART SPEC. M304TR0500W.035)
- 2) FINISH: POWDER COAT "BLACK SANDTEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3646-3" USING REMOVABLE TAG
- 7) WEIGHT: 0.57 lbs
- 8) MAKE PER TEMPLATE DT8959
- 9) PUNCH BOTH ENDS PER SPEC CONTROL DWG D2727

| | | | |
|------------|----------|--|--------------|
| DESIGN | | DART AEROSPACE LTD | |
| DRAWN | | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. B |
| MFG. APPR. | | D3646 | SHEET 2 OF 2 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | ARM | NTS |
| DATE | 09.06.04 | <small>COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small> | |

RELEASED
01/12/10 MP



Lean Training Event